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February 28, 2011

Mr. Paul Markovich
Executive Vice President and COO
Blue Shield of California
50 Beale Street
San Francisco, CA 94105

Re: Review of 2011 Blue Shield of California DOI Individual Rate Filing

Dear Paul:

We have completed our review of the Blue Shield of California (i.e., BSC) 2011 California DOI Individual Rate Filing as requested by BSC. Our assignment was as follows:

- Review current BSC rate filing, the benefit plans, rating structure and methodologies used to develop rates and rate increases
- Identify all key actuarial assumptions used by BSC to prepare information for rate filing
- Evaluate all key actuarial assumptions
- Validate BSC calculations to determine appropriateness and accuracy
- Test rates to determine whether they:
    - meet loss ratio requirements of the Department (i.e., the 70% lifetime loss ratio rule)
    - meet anticipated Federal loss ratio requirements of PPACA
    - meet anticipated wording of Federal oversight
- Prepare a written report summarizing our findings and provide to both BSC and the Department of Insurance.

We have accessed a significant number of materials provided directly to us by BSC. During the course of the project we requested additional information which was provided directly to us by Michael Beuoy, FSA, MAAA. We have assumed that the responses provided by BSC are complete and accurate. We are not expressing an opinion about the accuracy of the information provided by BSC. We are not aware of any effort by BSC to misrepresent any of the information we reviewed.

Summary of Findings

Our key findings are as follows:

- The nature of individual health insurance products leads to health care cost trend rates in excess of underlying generally observed health care trend rates for other markets (i.e., the group insurance market)
- BSC has priced these policies using either a policy lifetime average duration or durational factor beyond the current time period which has the effect of increasing early year prices higher than they need to be to pay claims in anticipation of greater claims in later policy years. As indicated in the previous review completed for the California Department of Insurance, this will require BSC to establish active life reserves.
- BSC has priced these policies to meet the 80% Federal PPACA annual loss ratio requirement. After appropriate adjustments to the loss ratios for Federal definitions, aggregate projected loss ratios in both 2011 and 2012 are expected to meet the 80% Federal PPACA requirement.
- We found no errors in the BSC rate filing.
- The BSC rating methodology was straightforward and relatively easy to follow and quite similar to that employed last year.
- BSC underlying trend assumptions are nearly identical to our firm's trend assumptions. BSC has reasonably adjusted trend for the impact of deductible leveraging.
- BSC included an explicit margin above and beyond trend to anticipate additional uncertainty in health care costs after the Federal PPACA was implemented. This margin is approximately 1.8% per year, and offsets the negative margin built into the final pricing.
- BSC's overall lifetime loss ratio is 90.4% based upon a premium and claims trend of 18% in the outyears. Reducing this to a 10% level to be consistent with the Department's previous recommendations in the filings of other companies reduces the lifetime loss ratio to 85.6%.
- BSC used reasonable lapse rate assumptions in this rate development.
- Sensitivity analysis performed on BSC assumptions showed no major concern areas regarding assumptions.
- It is our opinion that the BSC proposed rates are reasonable, not excessive, and meet the requirements of the California Department of Insurance, in addition to requirements of PPACA.
- It is our opinion that these rates will generate a small positive margin for BSC when investment income is included and as the new commission schedule comes into full effect. Subsidies from other lines of business will

be required to offset losses in the short term and to supplement minimal margins in the long term.

Background on Health Care Trends

Shortly after BSC submitted their Individual Rate Filing, which is the focus of this analysis, considerable public concern was voiced about the proposed rates and the level of the rate increases. BSC's request for this review occurred shortly after these issues were raised.

The premium rate development process is complex, especially for health insurance coverages, and usually requires specialized expertise from health actuaries to appropriately complete it. One of the critical assumptions in the rate development process is estimating the health care inflation or trend rate. This assumption is incorporated into the rate development process and is often a major contributor to the need to increase rates. As health care costs increase, rates also need to be increased to maintain adequate funds to pay the claims.

The underlying health care inflation rate is the combined effect of changes in utilization rates and changes in unit costs or per service costs. Each of these factors must be carefully analyzed and determined based upon prior periods and prior experience. Historical patterns in these rates are analyzed and reviewed and used to extrapolate future utilization and unit cost levels. For a variety of reasons historical overall trend rates have been much higher than general inflation and medical cost trends as measured by the Consumer Price Index. For example, when the general CPI reports a 3% inflation rate, it might also report a 6% medical services inflation rate, while the underlying combined utilization and trend rates for health insurance companies might be as high as 8% to 15%. Such results are not inconsistent with each other but rather reflect accurate results of what is being measured. There are several drivers which impact underlying health care trend rates, some of which include: changes in utilization patterns, changes in price of services, change in intensity of services, impact of new technology, aging of the average population, general economic factors, etc.

Based upon our company's proprietary research and analysis of health care costs and changes in them over time, we have established estimates of current health care trend rates between 2010 and 2011. We estimate that utilization is increasing at about 1.8% per year (i.e., ranging from about 1% for hospital inpatient to a high of about 3% for hospital outpatient and pharmacy services). We estimate that the average cost of services (i.e., unit costs of individual services) are increasing about 9.5% (i.e., ranging from 6% for physician and professional services to a high of about 13% for hospital outpatient services), for a combined trend rate of about 11.5%. This is our best estimate of underlying trend rates for the California region. It is quite common within the actuarial profession to reflect the volatility of trends when pricing insurance products and to include a margin in the trend. This margin is called a margin for "trend miss". We generally include a margin of 2% for this yielding our best estimate pricing trend of 13.5%. This is the same value used by us in our work for the California Department of Insurance in 2010.

Based upon results of our updated analysis, our preliminary estimates for trend between 2011 and 2012 are at or above the levels for the time period discussed above, most likely in the 13.5% to 14.0% range including the 2% trend miss margin.

There are several other factors which tend to increase the underlying inflation or trend rate observed in individual health insurance products. These include the following:

- Aging: as the individual ages, their expected health care costs tend to increase. For most adult ages the approximate increase is about 2%.
- Deductible leveraging: As deductibles increase, the effective inflation or trend rate increases. For BSC products, the average increase is about 2% for this issue.
- Wearing off of underwriting: As time passes and the insured moves away from the time they were underwritten and in better health, there is a tendency for health costs to increase as medical conditions emerge. The average increase for this is about 2% per year.
- Impact of biased lapses: The relatively high member lapse rates evident in these types of policies tend to increase observe trend rates. Healthier individuals tend to terminate more often as they can more readily find coverage elsewhere. As a result the average cost increases with a larger proportion of insured having a worse health status. This can increase observed trend by more than 1% to 2%per year.

Considering just these four factors, the average underlying trend rate would be increased by more than 7% per year. In recent years, the underlying rate of health care inflation or trend has been at or around 11.5%. Adjusting this for the three factors discussed above, the adjusted trend rate would be about 18.5%.

Until the characteristics of the underlying health care system are changed to produce a lower underlying rate of inflation (i.e., sometimes called "bending the trend"), it should not be surprising to see premium rates increasing at or around the 18.5% level. This is not to suggest that BSC rates or those for any other company will increase at this level indefinitely, but rather the nature of individual insurance policies will be at a higher than expected level until the underlying rates of inflation are effectively reduced.

If rate increases are materially different than 18.5%, other factors may exist to explain the variation. These could include:

- Correction for previous mis-pricing: as new products or policies are introduced, a health plan may mis-price the underlying health care costs of the product and as the actual experience emerges, as the health plan corrects for this, it can either raise or lower the rates to reflect that.
- Change in pricing strategy: if a health plan changes the way they price a product it can impact the rate change in a given year. For example, if a company transitions from an approach that increases rates annually for the wear-off of selection to an approach where the overall impact of this is amortized over the policy lifetime, an additional rate increase may result.
- Dramatic change in actuarial assumptions: As the experience emerges, one or more of the actuarial assumptions other than underlying health care costs may be different, and as reflected in the pricing, this could result in higher or lower health care costs and impact the rate increases.

Until there is a significant change in our health care system and how it works, the unfortunate outcome is higher than desired health care costs, higher than desired or expected rate increases on individual insurance products, and a continued concern about the affordability of health care. The recently passed health care reform bill was one attempt at impacting the cost of health care. If successful at reducing health care costs and the rate they change, then some relief may emerge on individual insurance policies.

Overview of Rate Development Process

BSC prepared a very useful summary exhibit (i.e., See Table 1) summarizing the rate development process by plan. This is presented in the next few pages. The rate development process is shown for each plan on a consistent step-by-step process. We have used this form as a tool is walking through the rate development process.

The chart begins with baseline (i.e., historical) and projected member months for each plan. The baseline premium is adjusted for previous rate increases getting is to what would be a current rate. The baseline period was the 12 month period ending August 31, 2010. Similar information was collected for claims, with adjustments for claims pooling (i.e., catastrophic claims), credibility, trend, policy duration, adverse deviation margin, etc. After administrative expenses and

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Table 1 Rate Development Process

1 - TARGET REVENUE

Logic	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Index	1	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Plan Code	7I	7P	7Q	7R	7S	7T	7U	7V	9S	9T	9U	9V	9W	9X	CB	CK	CM	CN	D0	DM	M0	O2	O3	XK	XO	Total	Total	Total
Plan Name	Vital Shield 900	Essential 1750	Balance 1000	Balance 1700	Balance 2500	Active Start 25 GenRx	Active Start 35 GenRx	Vital Shield 2900	Vital Shield Plus 400	Vital Shield Plus Gen Rx 400	Vital Shield Plus 900	Vital Shield Plus Gen Rx 900	Vital Shield Plus 2900	Vital Shield Plus Gen Rx 2900	Active Start 35	Active Start 25	Essential 3000	Essential 4500	PSP 5200	PSP 3500	PSP 4000	PPO 1500 (DOI)	PPO 2000 (DOI)	PPO 5000	PSP 1800	DOI UW Total	DMHC UW Total	UW Total
Member Months																												
Baseline	147,620	116,027	149,677	106,068	404,804	8,805	79,397	275,322	18,819	50,514	19,022	78,875	9,840	53,818	130,666	47,372	35,872	50,457	104,442	100,370	394,688	1,396	25,393	306,882	74,521	2,790,669	1,173,368	3,964,037
Projected	129,614	46,110	86,620	56,697	447,044	2,495	58,839	198,058	31,166	72,906	34,362	184,785	16,398	94,462	56,311	18,354	22,719	41,716	177,308	276,650	241,145	241	7,727	187,823	60,824	2,550,373	488,612	3,038,986
Revenue																												
Baseline	97.82	183.45	172.10	218.52	182.83	178.95	149.49	106.88	141.31	115.48	131.91	106.48	137.60	104.73	210.22	218.57	180.29	175.90	221.49	182.00	176.01	302.58	228.45	220.44	186.93	171.92	347.89	224.01
Rate Increases	30.0%	46.2%	31.2%	26.2%	23.6%	29.1%	32.9%	31.1%	26.6%	27.1%	26.8%	26.1%	25.7%	25.9%	24.0%	23.1%	27.6%	25.0%	21.9%	22.2%	20.7%	22.5%	23.8%	23.0%	20.9%	25.6%	41.1%	32.7%
On Rate	127.13	268.21	225.75	275.69	225.90	231.09	198.69	140.17	178.92	146.73	167.22	134.29	172.90	131.81	260.71	269.03	229.99	219.93	269.92	222.45	212.39	370.56	282.90	271.17	226.03	215.86	491.04	297.31
Demographics	5.1%	-4.3%	-2.6%	-6.3%	-1.5%	-2.7%	4.4%	3.3%	4.4%	8.5%	5.6%	6.7%	-1.5%	7.4%	-1.0%	-1.6%	-1.5%	2.2%	-10.0%	-12.6%	-2.2%	4.3%	3.1%	-1.9%	-1.7%	-1.6%	-0.4%	-1.1%
Final	133.65	256.77	219.77	258.21	222.42	224.86	207.53	144.72	186.75	159.21	176.54	143.24	170.22	141.53	258.05	264.83	226.46	224.77	242.80	194.45	207.82	386.35	291.66	266.15	222.26	212.30	488.90	294.17
Baseline CoHC																												
Actual	54.64	141.49	106.95	144.73	125.26	301.31	131.07	79.40	97.98	102.65	89.37	67.84	68.31	73.60	118.89	149.47	115.19	103.18	108.01	88.71	132.41	329.86	218.19	169.56	121.63	118.85	276.81	165.61
Pooled Claims	(5.16)	(19.06)	(6.85)	(15.65)	(25.24)	(168.71)	(16.78)	(28.65)	(18.95)	(16.86)	(7.33)	(4.87)	(16.60)	(25.09)	(4.95)	(22.36)	(12.27)	(20.89)	(20.97)	(12.82)	(24.70)	(113.16)	(21.59)	(44.18)	(25.32)	(22.36)	(50.86)	(30.80)
Pooling Charge	15.42	19.06	11.12	19.89	18.08	10.03	8.97	25.16	9.93	10.00	10.53	11.05	16.67	14.20	15.12	12.18	14.52	16.51	46.22	27.22	26.91	21.00	28.38	39.45	20.14	22.38	50.82	30.80
Pooled	64.90	141.49	111.23	148.97	118.10	142.63	123.26	75.91	88.96	95.79	92.56	74.03	68.38	62.71	129.05	139.29	117.45	98.80	133.26	103.11	134.62	237.70	224.98	164.84	116.45	118.87	276.78	165.61
Manual Claims	58.27	120.66	122.55	143.99	116.54	115.73	98.38	63.21	92.59	70.19	79.96	60.69	80.49	56.03	145.32	148.11	110.28	94.92	164.78	139.03	136.15	210.33	200.31	185.88	119.60	120.41	249.55	158.64
Credibility	100%	98%	100%	94%	100%	27%	81%	100%	100%	100%	100%	100%	100%	100%	100%	63%	55%	65%	0%	0%	100%	11%	46%	100%	79%	89%	97%	91%
Credibility Adjustment	64.90	141.14	111.23	148.67	118.10	123.02	118.62	75.91	88.96	95.79	92.56	74.03	68.38	62.71	129.05	142.57	114.20	97.43	164.78	139.03	134.62	213.28	211.66	164.84	117.12	120.99	278.77	167.70
Final Baseline Claims	64.07	139.32	109.80	146.76	116.58	121.43	117.09	74.93	87.82	94.56	91.37	73.07	67.50	61.90	127.39	140.73	112.73	96.18	162.66	137.24	132.89	210.53	208.93	162.72	115.61	119.44	275.43	165.61
Trend PMPMs																												
2008	64.07	139.32	109.80	146.76	116.58	121.43	117.09	74.93	87.82	94.56	91.37	73.07	67.50	61.90	127.39	140.73	112.73	96.18	162.66	137.24	132.89	210.53	208.93	162.72	115.61	119.44	275.43	165.61
2009	64.07	139.32	109.80	146.76	116.58	121.43	117.09	74.93	87.82	94.56	91.37	73.07	67.50	61.90	127.39	140.73	112.73	96.18	162.66	137.24	132.89	210.53	208.93	162.72	115.61	119.44	275.43	165.61
2010	69.30	150.21	118.68	158.82	126.29	130.69	126.12	81.37	94.93	102.04	98.93	79.00	73.32	67.15	137.37	151.63	121.83	104.18	177.24	148.87	144.46	228.35	226.79	177.39	125.58	129.52	298.63	179.58
2011	81.74	175.72	139.71	187.33	149.39	152.51	147.42	96.58	111.97	119.80	117.08	93.10	87.28	79.60	160.63	177.19	143.09	122.88	211.30	176.75	171.43	269.58	268.62	211.98	148.96	153.28	373.82	218.56
Trend	27.6%	26.1%	27.2%	27.6%	28.1%	25.6%	25.9%	28.9%	27.5%	26.7%	28.1%	27.4%	29.3%	28.6%	26.1%	25.9%	26.9%	27.8%	29.9%	28.8%	29.0%	28.0%	28.6%	30.3%	28.8%	28.3%		
2008	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
2009	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
2010	8.2%	7.8%	8.1%	8.2%	8.3%	7.6%	7.7%	8.6%	8.1%	7.9%	8.3%	8.1%	8.6%	8.5%	7.8%	7.7%	8.1%	8.3%	9.0%	8.5%	8.7%	8.5%	8.5%	9.0%	8.6%	8.4%		
2011	18.0%	17.0%	17.7%	17.9%	18.3%	16.7%	16.9%	18.7%	17.9%	17.4%	18.3%	17.8%	19.0%	18.5%	16.9%	16.9%	17.4%	18.0%	19.2%	18.7%	18.7%	18.1%	18.4%	19.5%	18.6%	18.3%		
Adjust PMPM's																												
Duration	102.61	201.36	153.87	183.58	151.15	161.31	159.25	111.63	149.87	159.83	151.65	125.74	107.38	102.70	172.41	187.41	154.88	136.95	183.96	171.92	179.34	298.96	282.92	213.04	141.53	161.94		
Selection	102.61	201.36	153.87	183.58	151.15	209.70	162.10	111.63	149.87	159.83	151.65	125.74	107.38	102.70	185.80	213.90	154.88	136.95	183.96	171.92	180.78	345.78	311.87	221.72	141.53	164.70		
Demographics	107.90	192.74	149.83	171.95	148.82	203.33	169.32	115.27	156.00	172.66	160.30	134.12	105.61	110.42	183.91	210.64	152.51	139.97	165.49	150.30	176.89	361.46	321.54	217.58	139.10	162.32		
Benefit Change	107.90	192.73	149.83	171.95	148.82	203.33	169.32	115.27	158.15	175.31	162.16	135.87	106.95	112.01	183.91	210.64	152.51	139.97	165.49	150.30	178.71	361.46	321.54	217.58	139.10	162.73		
Manual Adjustments	108.87	194.39	151.11	173.43	150.09	205.08	170.77	116.31	159.58	176.90	163.63	137.10	107.92	113.02	185.49	212.45	153.82	141.17	166.91	151.59	180.24	364.56	324.30	219.45	140.30	164.14		
PFAD	112.14	200.22	155.65	178.63	154.60	211.23	175.89	119.80	164.37	182.21	168.54	141.22	111.16	116.41	191.06	218.82	158.43	145.41	171.92	156.14	185.65	375.49	334.03	226.03	144.51	169.07		

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Adjustments																										
Duration	25.5%	14.6%	10.1%	-2.0%	1.2%	5.8%	8.0%	15.6%	33.8%	33.4%	29.5%	35.1%	23.0%	29.0%	7.3%	5.8%	8.2%	11.4%	-12.9%	-2.7%	4.6%	10.9%	5.3%	0.5%	-5.0%	5.7%
Selection	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.8%	14.1%	0.0%	0.0%	0.0%	0.0%	0.8%	15.7%	10.2%	4.1%	0.0%	1.7%
Demographics	5.2%	-4.3%	-2.6%	-6.3%	-1.5%	-3.0%	4.5%	3.3%	4.1%	8.0%	5.7%	6.7%	-1.7%	7.5%	-1.0%	-1.5%	-1.5%	2.2%	-10.0%	-12.6%	-2.2%	4.5%	3.1%	-1.9%	-1.7%	-1.4%
Benefit Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	1.5%	1.2%	1.3%	1.3%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.3%
Manual Adjustments	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
PFAD	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Admin PMPM's																										
PMPM Admin	139.78	227.85	183.28	206.27	182.23	238.86	203.53	147.44	192.01	209.85	196.18	168.85	138.79	144.05	218.69	246.46	186.07	173.04	199.55	183.77	213.28	403.13	361.67	253.67	172.14	196.70
% Alloc Admin	145.80	237.67	191.18	215.16	190.09	249.16	212.30	153.79	200.28	218.89	204.63	176.13	144.77	150.26	228.12	257.08	194.09	180.50	208.15	191.69	222.47	420.50	377.25	264.60	179.56	205.18
Broker/Prem Tax	162.12	264.27	212.58	239.24	211.36	277.04	236.06	171.00	222.70	243.39	227.53	195.84	160.98	167.07	253.65	285.85	215.81	200.70	231.45	213.15	247.37	467.56	419.47	294.22	199.66	228.14
Margin	159.72	260.37	209.44	235.70	208.24	272.95	232.57	168.48	219.41	239.79	224.17	192.95	158.60	164.61	249.90	281.62	212.62	197.74	228.03	210.00	243.72	460.65	413.27	289.87	196.71	224.77
Medical Management	1.43	2.34	1.88	2.12	1.87	2.45	2.09	1.51	1.97	2.15	2.01	1.73	1.42	1.48	2.24	2.53	1.91	1.77	2.05	1.88	2.19	4.13	3.71	2.60	1.77	2.02
Medical Management	1.43	2.34	1.88	2.12	1.87	2.45	2.09	1.51	1.97	2.15	2.01	1.73	1.42	1.48	2.24	2.53	1.91	1.77	2.05	1.88	2.19	4.13	3.71	2.60	1.77	2.02
Pricing CoHC	113.57	202.55	157.53	180.75	156.46	213.68	177.98	121.31	166.34	184.36	170.55	142.95	112.58	117.89	193.30	221.35	160.34	147.18	173.96	158.02	187.83	379.63	337.74	228.64	146.27	171.08
Admin / Margin																										
PMPM	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64	27.64
% Rev Alloc	6.02	9.82	7.90	8.89	7.85	10.29	8.77	6.35	8.27	9.04	8.45	7.28	5.98	6.21	9.42	10.62	8.02	7.46	8.60	7.92	9.19	17.37	15.59	10.93	7.42	8.48
Comm/Prem Tax	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%	10.2%
Margin	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%
Required Revenue	159.72	260.37	209.44	235.70	208.24	272.95	232.57	168.48	219.41	239.79	224.17	192.95	158.60	164.61	249.90	281.62	212.62	197.74	228.03	210.00	243.72	460.65	413.27	289.87	196.71	224.77
Required Rate Increase																										
Pre - Blending/Area Adjustments	19.5%	1.4%	-4.7%	-8.7%	-6.4%	21.4%	12.1%	16.4%	17.5%	50.6%	27.0%	34.7%	-6.8%	16.3%	-3.2%	6.3%	-6.1%	-12.0%	-6.1%	8.0%	17.3%	19.2%	41.7%	8.9%	-11.5%	5.9%
Closed Plan Load and Blending	0.2%	0.6%	0.3%	0.4%	0.1%	-13.5%	-6.5%	0.0%	10.5%	-13.7%	2.5%	-3.5%	40.3%	11.9%	7.9%	-1.8%	0.7%	-0.3%	8.7%	-5.7%	0.0%	-10.0%	-24.8%	0.1%	-0.4%	0.5%
Plan Increase (pre caps and floors)	19.8%	2.0%	-4.4%	-8.4%	-6.3%	5.0%	4.8%	16.5%	29.8%	29.9%	30.2%	30.0%	30.7%	30.1%	4.5%	4.4%	-5.4%	-12.3%	2.1%	1.9%	17.2%	7.3%	6.5%	9.0%	-11.8%	6.4%
Impact of Caps and Floors	-6.1%	2.2%	6.0%	10.0%	7.8%	1.5%	-0.3%	-5.3%	-9.8%	-9.8%	-10.5%	-10.4%	-10.6%	-10.8%	1.0%	2.2%	6.5%	14.2%	1.7%	1.8%	-3.7%	-0.3%	-0.1%	-1.8%	14.0%	0.1%
Final Increase	12.5%	4.2%	1.3%	0.8%	1.0%	6.6%	4.4%	10.3%	17.1%	17.2%	16.5%	16.5%	16.8%	16.1%	5.6%	6.8%	0.7%	0.2%	3.9%	3.7%	12.9%	7.0%	6.5%	7.0%	0.5%	6.5%
Actual Required (Post Norm)	160.08	261.85	210.05	236.54	208.34	236.15	217.41	168.55	242.43	206.89	229.80	186.26	222.46	184.14	269.69	276.56	214.16	197.09	247.85	198.11	243.65	414.69	310.72	290.09	195.97	224.61
Post Mix Baseline	133.66	256.49	219.25	257.61	221.96	225.65	206.71	144.70	186.02	158.94	175.88	143.14	169.96	141.70	258.02	264.73	226.17	223.87	241.59	194.40	207.49	380.13	293.01	266.04	222.32	202.23
Post Mix Required Revenue	159.78	261.05	209.15	235.96	207.71	269.02	232.43	168.16	219.31	240.68	226.45	193.77	154.93	161.20	249.74	280.43	213.89	196.11	226.80	209.28	242.80	443.69	414.69	289.37	195.52	215.24

profit margins were added, the required revenue was calculated and compared to current rates to determine the rate increases. This is a very logical and reasonable approach to develop rates and was straightforward to follow through its development.

BSC subsequently checked whether these rates met the State's 70% lifetime loss ratio requirement using a 25 year projection model as shown in the illustrative table for Vital Shield 900. This is identical to the exhibit developed by BSC with the exception we have added four columns in the middle of the exhibit showing PMPM revenue and COHC and the increases these values from the previous year.

Table 2 Illustrative Lifetime Loss Ratio Analysis – Vital Shield 900

Blue Shield of California Life & Health Insurance Company

Plan - Vital Shield 900

Discount Rate	1.40%

									DISCOUNTED			PMPM		
Year	Member Months	Revenue	Cost of Health Care	Loss Ratio	PMPM Rev	PMPM COHC	% increase Rev	% increase COHC	Revenue	Cost of Health Care	Loss Ratio	Revenue	Cost of Health Care	Loss Ratio
2004	0	$0	$0	0.0%	$ -	$ -			$0	$0	0.0%	$0.00	$0.00	0.0%
2005	0	$0	$0	0.0%	$ -	$ -	0.0%	0.0%	$0	$0	0.0%	$0.00	$0.00	0.0%
2006	0	$0	$0	0.0%	$ -	$ -	0.0%	0.0%	$0	$0	0.0%	$0.00	$0.00	0.0%
2007	0	$0	$0	0.0%	$ -	$ -	0.0%	0.0%	$0	$0	0.0%	$0.00	$0.00	0.0%
2008	19,485	$1,703,699	$1,100,117	64.6%	$ 87.44	$ 56.46	0.0%	0.0%	$1,727,551	$1,115,519	64.6%	$87.44	$56.46	64.6%
2009	112,334	$10,762,148	$7,947,454	73.8%	$ 95.80	$ 70.75	9.6%	25.3%	$10,762,148	$7,947,454	73.8%	$95.80	$70.75	73.8%
2010	174,115	$17,997,061	$12,365,848	68.7%	$ 103.36	$ 71.02	7.9%	0.4%	$17,748,581	$12,195,116	68.7%	$103.36	$71.02	68.7%
2011	158,301	$23,472,327	$17,039,369	72.6%	$ 148.28	$ 107.64	43.5%	51.6%	$22,828,650	$16,572,102	72.6%	$148.28	$107.64	72.6%
2012	124,300	$20,549,602	$17,160,657	83.5%	$ 165.32	$ 138.06	11.5%	28.3%	$19,710,133	$16,459,629	83.5%	$165.32	$138.06	83.5%
2013	91,747	$17,756,942	$16,052,290	90.4%	$ 193.54	$ 174.96	17.1%	26.7%	$16,796,405	$15,183,964	90.4%	$193.54	$174.96	90.4%
2014	29,709	$6,772,983	$6,465,679	95.5%	$ 227.98	$ 217.64	17.8%	24.4%	$6,318,154	$6,031,487	95.5%	$227.98	$217.64	95.5%
2015	22,148	$5,947,629	$5,946,840	100.0%	$ 268.54	$ 268.51	17.8%	23.4%	$5,471,623	$5,470,897	100.0%	$268.54	$268.51	100.0%
2016	16,770	$5,304,746	$5,492,401	103.5%	$ 316.32	$ 327.51	17.8%	22.0%	$4,812,812	$4,983,065	103.5%	$316.32	$327.51	103.5%
2017	12,776	$4,760,355	$5,092,928	107.0%	$ 372.60	$ 398.64	17.8%	21.7%	$4,259,275	$4,556,841	107.0%	$372.60	$398.64	107.0%
2018	9,745	$4,276,898	$4,717,613	110.3%	$ 438.90	$ 484.13	17.8%	21.4%	$3,773,873	$4,162,754	110.3%	$438.90	$484.13	110.3%
2019	7,479	$3,866,609	$4,391,113	113.6%	$ 516.99	$ 587.12	17.8%	21.3%	$3,364,734	$3,821,159	113.6%	$516.99	$587.12	113.6%
2020	5,916	$3,602,766	$4,180,290	116.0%	$ 608.98	$ 706.60	17.8%	20.3%	$3,091,851	$3,587,475	116.0%	$608.98	$706.60	116.0%
2021	5,027	$3,606,039	$4,211,323	116.8%	$ 717.33	$ 837.74	17.8%	18.6%	$3,051,933	$3,564,208	116.8%	$717.33	$837.74	116.8%
2022	4,308	$3,640,251	$4,262,046	117.1%	$ 844.96	$ 989.29	17.8%	18.1%	$3,038,351	$3,557,334	117.1%	$844.96	$989.29	117.1%
2023	3,696	$3,678,581	$4,306,922	117.1%	$ 995.30	$ 1,165.31	17.8%	17.8%	$3,027,951	$3,545,159	117.1%	$995.30	$1,165.31	117.1%
2024	3,171	$3,717,314	$4,352,272	117.1%	$ 1,172.39	$ 1,372.65	17.8%	17.8%	$3,017,588	$3,533,025	117.1%	$1,172.39	$1,372.65	117.1%
2025	2,720	$3,756,455	$4,398,098	117.1%	$ 1,380.99	$ 1,616.88	17.8%	17.8%	$3,007,259	$3,520,932	117.1%	$1,380.99	$1,616.88	117.1%
2026	2,334	$3,796,008	$4,444,408	117.1%	$ 1,626.70	$ 1,904.56	17.8%	17.8%	$2,996,966	$3,508,881	117.1%	$1,626.70	$1,904.56	117.1%
2027	2,002	$3,835,977	$4,491,204	117.1%	$ 1,916.13	$ 2,243.43	17.8%	17.8%	$2,986,709	$3,496,871	117.1%	$1,916.13	$2,243.43	117.1%
2028	1,717	$3,876,368	$4,538,494	117.1%	$ 2,257.06	$ 2,642.59	17.8%	17.8%	$2,976,486	$3,484,902	117.1%	$2,257.06	$2,642.59	117.1%
2029	1,473	$3,917,184	$4,586,281	117.1%	$ 2,658.65	$ 3,112.78	17.8%	17.8%	$2,966,298	$3,472,975	117.1%	$2,658.65	$3,112.78	117.1%
2030	1,264	$3,958,429	$4,634,572	117.1%	$ 3,131.69	$ 3,666.62	17.8%	17.8%	$2,956,145	$3,461,088	117.1%	$3,131.69	$3,666.62	117.1%
2031	1,084	$4,000,109	$4,683,371	117.1%	$ 3,688.90	$ 4,319.00	17.8%	17.8%	$2,946,027	$3,449,241	117.1%	$3,688.90	$4,319.00	117.1%
2032	930	$4,042,227	$4,732,684	117.1%	$ 4,345.25	$ 5,087.46	17.8%	17.8%	$2,935,944	$3,437,435	117.1%	$4,345.25	$5,087.46	117.1%
2033	798	$4,084,790	$4,782,516	117.1%	$ 5,118.38	$ 5,992.65	17.8%	17.8%	$2,925,895	$3,425,670	117.1%	$5,118.38	$5,992.65	117.1%
2034	685	$4,127,800	$4,832,873	117.1%	$ 6,029.07	$ 7,058.90	17.8%	17.8%	$2,915,881	$3,413,945	117.1%	$6,029.07	$7,058.90	117.1%
Historical	131,819	$12,465,847	$9,047,571	72.6%	$ 94.57	$ 68.64			$12,489,698	$9,062,973	72.6%	$94.57	$68.64	72.6%
Projected	684,215	$168,345,446	$162,162,092	96.3%	$ 246.04	$ 237.00			$149,925,524	$141,896,155	94.6%	$246.04	$237.00	96.3%
Lifetime	816,034	$180,811,293	$171,209,664	94.7%	$ 221.57	$ 209.81			$162,415,222	$150,959,128	92.9%	$221.57	$209.81	94.7%

We carefully reviewed both the premium development and the projected lifetime loss ratio calculations for each of the plans and assessed whether or not we agreed with the results developed by BSC and determined whether or not each met the requirements of the State of California.

Table 3 summarizes the projected lifetime loss ratios for each of the BSC plans as developed by BSC.

Table 3 BSC Projected Lifetime Loss Ratios by Plan*

Plan	2011 Member Months	2011 PMPM Revenue	2010 Loss Ratio	Lifetime Loss Ratios		
				Historical	Future	Total
Active Choice 600	0	0	**0**	77.6%	0%	77.6%
Vital Shield 900	158,301	$148.23	**68.7%**	72.6%	94.6%	92.9%
Essential 1750	57,602	$265.71	77.5%	91.7%	102.8%	99.7%
Balance 1000	107,107	$224.91	**68.8%**	**68.5%**	96.3%	90.1%
Balance 1700	70,230	$263.86	**68.6%**	78.4%	101.0%	96.4%
Balance 2500	533,450	$226.92	**69.6%**	**67.0%**	89.1%	87.3%
Active Start 25 GenRx	3,240	$234.48	153.4%	125.8%	124.6%	125.0%
Active Start 35 GenRx	71,520	$212.46	83.7%	92.7%	108.9%	106.7%
Vital Shield Plus 400	37,323	$217.70	71.7%	76.9%	102.1%	101.4%
Vital Shield 2900	242,407	$157.83	78.2%	**65.3%**	99.8%	95.8%
Vital Shield Plus GenRx 400	87,134	$185.93	86.1%	87.2%	110.4%	109.6%
Vital Shield Plus 900	40,837	$202.51	81.8%	**65.7%**	100.6%	99.8%
Vital Shield Plus GenRx 900	218,139	$164.44	73.2%	**65.6%**	97.5%	96.8%
Vital Shield Plus 2900	19,654	$192.88	**69.7%**	**32.6%**	91.6%	90.0%
Vital Shield Plus GenRx 2900	112,249	$162.12	81.1%	70.2%	90.8%	90.2%
Active Start 25	23,173	$281.41	78.3%	73.4%	96.8%	85.9%
Active Start 35	70,188	$271.42	**67.8%**	72.4%	85.5%	79.2%
Essential 3000	27,363	$225.11	70.4%	74.4%	94.9%	88.6%
Essential 4500	49,855	$221.21	**66.1%**	**53.2%**	88.6%	83.0%
PSP 5200	209,029	$248.20	**62.2%**	**49.8%**	87.4%	86.6%
PSP 3500	322,665	$194.81	70.3%	**46.0%**	95.9%	95.2%
PPO Savings 4000	294,265	$227.28	81.9%	**60.9%**	98.6%	90.7%
PPO Savings 1800	73,941	$226.95	75.7%	**57.3%**	84.1%	82.7%
PPO 1500 (DOI)	320	$486.39	106.6%	112.8%	93.9%	104.6%
PPO 2000 (DOI)	9,951	$309.70	99.3%	80.8%	125.4%	105.1%
PPO 5000	229,472	$274.90	82.0%	**67.3%**	99.0%	88.8%
All Plans	3,069,345	$213.26	74.7%	**69.4%**	94.9%	90.4%

*Loss ratios less than 70% have been shown in bold font

As the footnote shows, we have bolded any loss ratio that is less than 70%. None of the plans have a total lifetime loss ratio less than 70%, the historical California requirement.

The projected 2011 member months for plans range from a low of 320 to a high in excess of 500,000. Some of the loss ratios are based upon credible experience, others not. We combined experience for individual plans by key product form to obtain more credible experience, producing loss ratios that are more representative of the experience and a more reliable measure to assess premium appropriateness. Table 4 presents the above data in this format.

Table 4 BSC Projected Lifetime Loss Ratios by Common Plan*

Plan	2011 Member Months	2011 PMPM Revenue	2010 Loss Ratio	Lifetime Loss Ratios		
				Historical	Future	Total
Active Choice	0	0	**0%**	77.6%	0%	77.6%
Balance Plans	710,787	$230.27	**69.3%**	70.0%	91.4%	88.8%
Active Start GenRx	74,760	$213.42	90.2%	98.6%	109.6%	107.9%
Vital Shield Plans	757,743	$169.86	78.0%	**66.8%**	98.5%	96.5%
Active Start Plans	93,291	$273.90	70.6%	72.6%	88.1%	80.7%
Essential Plans	77,218	$222.59	**67.8%**	**64.9%**	95.9%	91.7%
PSP Plans	531,695	$215.80	**66.2%**	**48.2%**	91.5%	90.8%
PPO Savings	368,205	$227.21	80.7%	**60.7%**	95.9%	89.4%
PPO (DOI)	10,271	$315.20	99.8%	83.2%	124.0%	105.0%
PPO 5000	229,472	$274.90	82.0%	**67.3%**	99.0%	88.8%
All Plans	3,069,345	$213.26	74.7%	**69.4%**	94.9%	90.4%

*Loss ratios less than 70% have been shown in bold font

Even after combining the plans, some of the categories still fail to have adequate member months to totally rely on their experience results without further adjustment, although none of these plan combinations had loss ratios less than 70%.

Analysis of BSC Rate Development

Beginning with the rate development process, we have reviewed in depth each of the key assumptions and adjustments as completed by BSC. We have included comments on each of the key items.

- **PMPM Revenue for experience period:** We compared the PMPM revenue for each of the plans as shown Table 1 to that provided by BSC in separate information. As Table 5 shows the premium information is internally consistent.

Table 5 Comparison of Revenue PMPM by Plan

Plan	Baseline Revenue PMPM (9/2009 – 8/2010)	Revenue PMPM Derived from Premium Records
Active Choice 600	$0	$0
Vital Shield 900	$98	$99
Essential 1750	$183	$188
Balance 1000	$172	$173
Balance 1700	$219	$219
Balance 2500	$183	$182
Active Start 25 GenRx	$179	$179
Active Start 35 GenRx	$149	$152
Vital Shield Plus 400	$141	$143
Vital Shield 2900	$107	$108
Vital Shield Plus GenRx 400	$115	$118
Vital Shield Plus 900	$132	$134
Vital Shield Plus GenRx 900	$106	$108
Vital Shield Plus 2900	$138	$138
Vital Shield Plus GenRx 2900	$105	$106
Active Start 25	$219	$218
Active Start 35	$210	$210
Essential 3000	$180	$182
Essential 4500	$176	$178
PSP 5200	$221	$223
PSP 3500	$182	$182
PPO Savings 4000	$176	$177
PPO Savings 1800	$187	$185
PPO 1500 (DOI)	$303	$329
PPO 2000 (DOI)	$228	$229
PPO 5000	$220	$219
All Plans	$172	$172

BSC developed a summary of previous rate increases and adjustments to transition the above premium rates to current rate levels. These adjustments were reasonable and correctly completed.

- **PMPM Claims for experience period:** We compared claims PMPM for each of the plans as shown on the rate development summary to amounts produced by BSC in separate information. Table 6 shows that the information is internally consistent.

Table 6 Comparison of Claims PMPM by Plan

Plan	Baseline COHC PMPM (6/2009 – 5/2010)	COHC PMPM Derived from Claim Records
Active Choice 600	$0	$0
Vital Shield 900	$64	$71
Essential 1750	$141	$158
Balance 1000	$110	$119
Balance 1700	$147	$156
Balance 2500	$125	$127
Active Start 25 GenRx	$301	$279
Active Start 35 GenRx	$131	$131
Vital Shield Plus 400	$98	$106
Vital Shield 2900	$79	$80
Vital Shield Plus GenRx 400	$103	$103
Vital Shield Plus 900	$91	$98
Vital Shield Plus GenRx 900	$73	$75
Vital Shield Plus 2900	$68	$71
Vital Shield Plus GenRx 2900	$74	$80
Active Start 25	$149	$155
Active Start 35	$119	$133
Essential 3000	$115	$132
Essential 4500	$103	$105
PSP 5200	$108	$124
PSP 3500	$89	$105
PPO Savings 4000	$132	$136
PPO Savings 1800	$121	$126
PPO 1500 (DOI)	$330	$331
PPO 2000 (DOI)	$218	$211
PPO 5000	$168	$168
All Plans	$119	$119

Claims were adjusted for pooling of catastrophic claims, individually by plan adjusted for credibility with company rating manual, trended to the middle of the projection period (i.e., varied by plan based upon actual distribution of business by renewal date) to determine an adjusted base period claims level. Table 6 shows that the claims values were reasonable compared to independent data.

- **Health Care Trend Adjustment:** Trend adjustments were based upon underlying trend assumptions for each calendar year time period between the center of the experience period (i.e., middle of 6/1/2009 – 5/31/2010) to the middle of the projection period (i.e., rates effective beginning 3/1/2011). The trend assumptions for this time periods ranged from

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12.2% for trend between 2009 and 2010 to 13.5% for the trend between 2010 to 2011. These trend values were for the underlying trend assumption prior to any adjustment for plan design (i.e., trend leveraging), wear-off of selection, aging, etc. As mentioned earlier, our firm's prospective trend assumption for projecting from 2010 to 2011 is 13.5% (i.e., underlying assumption of 11.5% with a 2% trend-miss margin). The BSC explicit assumption matches our initial assumption for 2010 to 2011.

In addition to these trend assumptions, BSC has included an explicit 3% margin (i.e., called PFAD or Provision for Adverse Deviation) in claims projection. This margin was increased from a 1% margin included in the previous rate filings. BSC provided the explanation that this was increased from prior levels to account for their perceived additional uncertainty in trend based upon the potential impact of PPACA on health care trends. The difference between BSC trend and our best estimate is the 3% margin. Since the projection period is approximately 20 months, the margin is equivalent to a 1.8% per year margin.

In addition to the underlying trend assumption, BSC appropriately incorporates a deductible leveraging adjustment to reflect the anticipated effect of plan design on the underlying trends. The values were based upon internal claims probability distributions based upon BSC experience. The values were reasonable and appropriately applied to the underlying trend assumptions referred to above.

- **Policy Duration Adjustment:** BSC has developed selection factors by policy duration (i.e., by month through 10 years post-issue). The non-maternity factors range from about .40 in the first month to about 1.30 for duration 120 months and beyond. We analyzed and compared the composite factors developed by BSC and used in their rate development and found them reasonable.

  For each plan, BSC calculated average duration factors by month ranging from June 2009 through December 2011 based upon current and projected members by duration. They derived an average factor for the baseline time period and also for the projection period. Since BSC has been pricing using a lifetime average duration factor, they compared the lifetime average duration factor to that for the baseline period to determine what increase is anticipated in the future. On some of the policy forms, BSC used a projection period factor and increase instead of the lifetime average duration factor (i.e., Active Start GenRx 35, Active Start 35, PSP 4000, Active Start GenRx 35, Active Start 25, PPO 1500(DOI), PPO 2000(DOI), PPO 5000, and PSP 4000).

Table 7 summarizes the durational information by plan showing the key factors and methodologies.

Table 7 Analysis of Average Duration Factor by Plan

Plan	Baseline Average Duration Factor	Projected Average Duration Factor	Methodology	Duration Adjustment
Active Choice 600	N/A	N/A	N/A	N/A
Vital Shield 900	.778	.861	Lifetime	25.5%
Essential 1750	.852	.905	Lifetime	14.5%
Balance 1000	.886	.922	Lifetime	10.1%
Balance 1700	.996	1.026	Lifetime	-2.0%
Balance 2500	.965	.987	Lifetime	1.1%
Active Start 25 GenRx	.848	.898	Projected	5.8%
Active Start 35 GenRx	.844	.912	Projected	8.0%
Vital Shield Plus 400	.728	.852	Lifetime	33.8%
Vital Shield 2900	.844	.921	Lifetime	15.6%
Vital Shield Plus GenRx 400	.732	.835	Lifetime	33.4%
Vital Shield Plus 900	.753	.844	Lifetime	29.5%
Vital Shield Plus GenRx 900	.723	.810	Lifetime	35.1%
Vital Shield Plus 2900	.794	.846	Lifetime	23.0%
Vital Shield Plus GenRx 2900	.757	.849	Lifetime	29.0%
Active Start 25	.933	.986	Projected	5.8%
Active Start 35	.985	1.058	Projected	7.3%
Essential 3000	.902	.950	Lifetime	8.2%
Essential 4500	.876	.969	Lifetime	11.4%
PSP 5200	1.121	1.060	Lifetime	-12.8%
PSP 3500	1.004	.947	Lifetime	-2.8%
PPO Savings 4000	1.031	1.079	Projected	4.6%
PPO Savings 1800	1.028	1.066	Lifetime	-5.0%
PPO 1500 (DOI)	.914	1.007	Projected	10.9%
PPO 2000 (DOI)	.972	1.023	Projected	5.3%
PPO 5000	1.066	1.071	Projected	0.5%
All Plans			N/A	5.7%

The duration adjustments shown in the far right column in Table 7 are consistent with the average duration factors we calculated and those used in the rate development by BSC. This process incorporates the anticipated changes in the average cost of care resulting from member durational aging. In the case of relatively new products (i.e., Vital Shield Plus 2900), where first issues occurred in 2009, the durational adjustment factor in Table 7 is substantial. In the more mature products (i.e., Active Start 25), the durational adjustment factor is much smaller. This adjustment factor is used to adjust the claims costs for premium development purposes. The claims costs in future years used in the loss ratio exhibits shows the gradual year to year impact of the increasing durational factor.

- **Provision for Adverse Deviation:** In prior years which we have reviewed, BSC has added a 1% margin to projected claims costs for all plans. In this filing, BSC increased this to 3% in light of their anticipated increased uncertainty in health care trends as a result of PPACA. As discussed above in the trend section, we had previously assumed that this adjustment might be viewed as a "trend miss" margin as we had included in our underlying trend assumptions. With the increase to 3% BSC has built in a 1.8% annual margin above and beyond our assumptions. BSC adds a separate profit and risk margin later in the calculations, however, the margin is negative in this rate development (i.e., -1.5%).

- **Administrative Expense Load:** BSC builds in an administrative expense load using multiple components consisting of a fixed PMPM cost, a percentage of revenue, and a component for commissions and premium taxes. We have presented these assumptions in Table 8, and the effective pricing loss ratio for each plan.

Table 8 Analysis of Expense Margin and Pricing Loss Ratio

Plan	Assumed Expense Margin	Pricing Loss Ratio
Active Choice 600	N/A	N/A
Vital Shield 900	30.4%	71.1%
Essential 1750	23.7%	77.8%
Balance 1000	26.3%	75.2%
Balance 1700	24.8%	76.7%
Balance 2500	26.4%	75.1%
Active Start 25 GenRx	23.2%	78.3%
Active Start 35 GenRx	25.0%	76.5%
Vital Shield Plus 400	25.7%	75.8%

Vital Shield 2900	29.5%	72.0%
Vital Shield Plus GenRx 400	24.6%	76.9%
Vital Shield Plus 900	25.4%	76.1%
Vital Shield Plus GenRx 900	27.4%	74.1%
Vital Shield Plus 2900	30.5%	71.0%
Vital Shield Plus GenRx 2900	29.9%	71.6%
Active Start 25	22.9%	78.6%
Active Start 35	24.1%	77.4%
Essential 3000	26.1%	75.4%
Essential 4500	27.1%	74.4%
PSP 5200	25.2%	76.3%
PSP 3500	26.3%	75.2%
PPO Savings 4000	24.4%	77.1%
PPO Savings 1800	27.1%	74.4%
PPO 1500 (DOI)	19.1%	82.4%
PPO 2000 (DOI)	19.8%	81.7%
PPO 5000	22.6%	78.9%
All Plans	25.4%	76.1%

As Table 8 shows, the sum of the shown administrative expense as a percent of premium is greater than 30% on a few plans, is below 20% on a few plans with most plans being in the mid-20s. All of the plans have a pricing loss ratio greater than 70%, with two of the plans greater than 80%.

- **Risk and Profit Margin:** BSC built in a margin of -1.5% into its products in this rate filing. This is separate from the PFAD which we previously allocated to the trend margin. Although this results in lower rates, it does not provide adequate margins to sustain a viable product long term unless there are other margins in rates. The PFAD was increased in this rate filing from 1% to 3% which provides a 1.8% annual offset to this (i.e., a net margin of 0.3%).

- **Impact of Rating Tiers:** As with most carriers, BSC underwrites each policy and assigns policyholders to a rating tier based upon the results of underwriting. In the future, it is our understanding this practice will have to be discontinued as part of health care reform, but it is still acceptable today. Table 9 summarizes the distribution by rating tier obtained from the previous rate filing. The composite impact on rates is a 5.23% increase in revenue which is offset by a comparable cost increase.

Table 9 Analysis of Rating Tier Impact on Rate Level

Rating Tier	Rating Factor	Distribution
Tier 1	1.0000	87.2%
Tier 2	1.2500	9.7%
Tier 3	1.5625	1.9%
Tier 4	1.8750	0.9%
Tier 5	3.1250	0.4%
Overall	1.0523	100.0%

- **Required Revenue and Projected Rate Increase:** BSC projected a required revenue level by plan and an implied rate for each plan. This resulted in rate changes ranging from a reduction of 12.5% to an increase of 30.1% on various plans. BSC capped the rate increases to no more than 17% and reallocated the required revenue by plan, keeping the overall revenue constant to determine the final rate increases by plan. This raised the lowest rate increase to 0.2% and maintained the overall rate increase at 6.5%. Table 10 presents the final projected average PMPM rates for each plan, their anticipated pricing loss ratio and the derived and final rate increases for each.

Table 10 Analysis of Projected New Rates by Plan

Plan	Projected Average PMPM Rate	Anticipated Pricing Loss Ratio	Initial Rate Increase	Final Rate Increase
Active Choice 600	N/A	N/A	N/A	N/A
Vital Shield 900	$150	75.5%	19.8%	12.5%
Essential 1750	$268	75.7%	2.0%	4.2%
Balance 1000	$223	70.7%	-4.4%	1.3%
Balance 1700	$260	69.4%	-8.4%	0.8%
Balance 2500	$225	69.7%	-6.3%	1.0%
Active Start 25 GenRx	$240	89.1%	5.0%	6.6%
Active Start 35 GenRx	$217	82.1%	4.8%	4.4%
Vital Shield Plus 400	$219	76.0%	29.8%	17.1%
Vital Shield 2900	$160	76.0%	16.5%	10.3%
Vital Shield Plus GenRx 400	$187	98.8%	29.9%	17.2%
Vital Shield Plus 900	$206	82.9%	30.2%	18.5%
Vital Shield Plus GenRx 900	$167	85.6%	30.0%	16.5%
Vital Shield Plus 2900	$199	58.6%	30.7%	16.8%
Vital Shield Plus GenRx 2900	$164	71.7%	30.1%	16.1%
Active Start 25	$283	78.3%	4.4%	6.8%
Active Start 35	$272	70.9%	4.5%	5.6%
Essential 3000	$228	70.3%	-5.4%	0.7%
Essential 4500	$225	65.4%	-12.3%	0.2%

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PSP 5200	$252	69.0%	2.1%	3.9%
PSP 3500	$202	78.4%	1.9%	3.7%
PPO Savings 4000	$235	80.0%	17.2%	12.9%
PPO Savings 1800	$223	65.5%	-11.8%	0.5%
PPO 1500 (DOI)	$413	91.8%	7.3%	7.0%
PPO 2000 (DOI)	$311	108.8%	6.5%	6.5%
PPO 5000	$285	80.3%	9.0%	7.0%
All Plans	$226	75.6%	6.4%	6.5%

Only one of the plans (i.e., Vital Shield Plus 2900) has an unusually low loss ratio and that is a relatively new plan started in 2009. With relatively low membership and its recent issue, this is not of a concern in light of the durational factors.

Analysis of Lifetime Loss Ratio Calculations

As mentioned earlier, BSC developed a 25 year projection of experience to calculate the lifetime loss ratio for each of the plans and in total. We have reviewed each of the key components in this calculation to assess whether or not we believe it realistically projects the anticipated lifetime loss ratio. Our comments are presented by component.

- **Discount Rate:** BSC has used a 1.40% discount rate for these calculations, reflective of the very low interest rates in place at this time. We would expect a discount rate in the range of 2% - 6%. The BSC assumption is below the low end of that range. Changing the assumption to 4% (i.e., the midpoint of that range) decreases the total lifetime loss ratio by two and one-half percentage points (i.e., from 90.4% to 87.9%) . We accept the BSC assumption.

- **Historical Premium and Claim Matching:** Since the rate development process is somewhat independent of the lifetime loss ratio calculation it is critical that these processes are internally consistent. We checked both premiums and claims to be sure the projections were reasonable and were also based upon information consistent with the premium development process. We completed this process by plan and in the aggregate to be sure calculations were reasonable.

  At initial look there are some discrepancies with the claims, however when adjusting for medical management expenses, pooling, and credibility adjustments, they are very consistent and are reasonable.

- **Membership Projections and Lapse Rate Assumptions:** One of the key assumptions in the lifetime loss ratio calculations is the membership projection reflecting anticipated lapse rates. BSC provided estimated sales by plan and overall lapse rates to project future membership by plan. The same lapse rates were used on all plans. Membership was provided by duration and by plan to project the future membership by plan for the lifetime loss ratio calculations. The lapse rates were reasonable and were based upon BSC experience. We noted no material adjustment in lapse rates from prior filings, and in particular no noted change for PPACA.

- **Projected PMPM Premium and Claims:** BSC projected both premium and claims for future time periods. The premiums were projected based upon the proposed rate increases as they impacted the policies by renewal month and then were increased at a rate consistent with underlying trend assumptions approximating 13.5% per year. The claims projection included the impact of inflation with leveraging in addition to aging and the wear-off of selection (i.e., the duration factor). BSC calculated durational adjustments by plan based upon selection factors and projected members by year by duration. The assumed impact of duration above and beyond inflation wore off by 2023.

  In prior rate filings, the Department encouraged companies to use a common trend assumption for both revenue and claims in the out years of the projection, with most using a modest value of 8% or 10% in the out years. In this BSC filing used a common trend number but it was close to that used in the early years of the projection. No one knows what the trend rates will be. Proponents of PPACA assume that trend rates will come down to more reasonable levels. The consumers hope trend rates will come down. A historical look at trend rates suggests that rates have been quite high for some time and perhaps it is unlikely they will come down. We derived some alternative projections where we use lower trend assumptions.

  This durational impact (i.e., where claims are projected at a higher near term rate than premiums) helps produce a lifetime loss ratio higher than the current pricing loss ratio. The recognition of this in prior BSC rate filings led to a Department of Insurance requirement that BSC, and other carriers using this approach, establish active life reserves. BSC agreed to establish such reserves in response to the Department's request.

Table 11 presents the impact on lifetime loss ratios when using the lower trend assumption for both premium and claims beyond the early years. The impact on the overall lifetime loss ratio is shown in Table 11 for the overall plans combined.

Table 11 Analysis of Revised Inflationary Trend on Lifetime Loss Ratios

Scenario	Initial	Revised
Current 18.6%	90.4%	90.4%
15%	90.4%	88.2%
12%	90.4%	86.5%
10%	90.4%	85.5%
8%	90.4%	84.5%

If the assumed rate increases are reduced to 10%, there is approximately a 5% reduction in the lifetime loss ratio for the overall program. A 12% assumption reduces it by about 4%.

Sensitivity Analysis

We have reviewed and analyzed each of the key BSC assumptions used to project the lifetime loss ratios to assess how reasonable these assumptions were and their effect on the projected lifetime loss ratio. As part of this analysis we have compared their assumptions to our best estimate and our range of acceptable assumptions.

Table 12 Categories of Alternate Assumptions

Alternate Assumption	Description
Underlying Claims Trend	The underlying health care claims trend including both utilization and unit cost trends. This assumption is prior to plan specific adjustments (e.g., deductible leveraging). Other factors such as aging, wearing off of underwriting, durational factors, etc. all apply to the projected claims after the underlying claims trend is applied. The current assumptions for this are: ○ BSC: 15.3% ○ AHP: 13.5% ○ "low": 12.0% ○ "high": 15.0%
Claim Selection Curve	BSC has used a common selection curve for their products ranging from an average of .72 in the first year following

	issue to about 1.30 at 10 years and beyond. We have compared this to: • AHP best estimate: .70 ranging to 1.30 • "low" (i.e., steeper): .60 ranging to 1.40 • "high" (i.e., flatter): .80 ranging to 1.20
Lapse rate assumptions	Lapse rates define how quickly policyholders terminate policies by policy duration. BSChas conducted lapse studies to estimate their lapses by policy duration and have used the results of these studies to develop their assumptions. We have used this information to define alternate lapse rates for our assumption testing. The assumptions for this are: o BSC: standard lapse rates o AHP: standard lapse rates o "low": 90% of BSC o "high": 110% of BSC
Length of Projection Period in Lifetime Loss Ratio Calculations	BSC used a 25 year projection period. We recommend a minimum of 15 - 20 years. We have compared the results to: • BSC: 25 years • AHP: 15 years • "low": 10 years • "high": 25 years

Impact of Trend Sensitivity: All of the lifetime loss ratios calculated by BSC exceeded 70%. Since BSC trend rates were at the low end of our range of reasonable assumptions, including higher rates results in higher lifetime loss ratios. Table 13 presents lifetime loss ratios for alternate assumptions for each of the major plan groupings. In all cases the lifetime loss ratios increase for higher trend assumptions. As expected all are in excess of 70%.

Table 13 Alternate Trend Assumption* Lifetime Loss Ratios by Plan

Plan	BSC	10%	12%	13.5%	15%
Active Choice	N/A	N/A	**N/A**	N/A	N/A
Balance Plans	88.9%	84.5%	85.5%	86.3%	87.1%
Active Start GenRx Plans	107.9%	103.4%	104.6%	105.5%	106.5%
Vital Shield Plans	96.5%	91.0%	92.2%	94.7%	95.8%
Active Start Plans	80.7%	78.0%	78.6%	79.1%	79.7%
Essential Plans	91.7%	87.4%	88.5%	89.3%	90.2%
PSP Plans	90.8%	87.3%	88.1%	88.7%	89.3%

PPO Savings	89.4%	83.8%	85.0%	85.9%	86.9%
PPO (DOI)	105.0%	98.0%	99.3%	100.4%	101.6%
PPO 5000	88.8%	82.6%	83.7%	84.6%	85.6%
All Plans	90.4%	85.6%	86.6%	87.4%	88.3%

*refers to reducing both rate increases and claims cost increases to trend rate after rate increase year

Impact of Alternate Selection Curve: We compared alternative selection curves to the lifetime loss ratios based upon holding the rate increases at 10% after the initial rate increase filed for in this rate filing. The current assumptions used by BSC are very close to and nearly equivalent to our best estimate assumptions. Steeper assumptions (i.e., the .6 to 1.) raise the loss ratios and the flatter assumptions (i.e., .8 to 1.20) lower the life time loss ratios. The flatter scenario results in lifetime loss ratios on several plan combinations that fail to meet the 70% requirements.

Table 14 Alternate Selection Curve Assumption Lifetime Loss Ratios by Plan

Plan	BSC	10%	70 to 1.30	.60 to 1.40	.80 to 1.20
Active Choice	N/A	N/A	N/A	N/A	N/A
Balance Plans	88.9%	84.5%	82.1%	90.1%	73.7%
Active Start GenRx Plans	107.9%	103.4%	101.9%	112.9%	97.8%
Vital Shield Plans	96.5%	91.0%	88.5%	101.9%	76.9%
Active Start Plans	80.7%	78.0%	76.9%	91.1%	66.8%
Essential Plans	91.7%	87.4%	85.2%	101.8%	75.6%
PSP Plans	90.8%	87.3%	84.9%	101.3%	74.3%
PPO Savings	89.4%	83.8%	80.7%	98.9%	70.3%
PPO (DOI)	105.0%	98.0%	95.6%	114.3%	83.5%
PPO 5000	88.8%	82.6%	79.3%	87.3%	69.4%
All Plans	90.4%	85.6%	83.1%	90.7%	73.2%

Impact of Alternate Lapse Rates: We compared alternative selection lapse rates on the projected lifetime loss ratios. There was a minor impact and none of the plans had lifetime loss ratios dropping below 70%.

Table 15 Alternate Lapse Rate Assumption Lifetime Loss Ratios by Plan

Plan	BSC	10%	BSC – 10%	BSC + 10%
Active Choice	N/A	N/A	N/A	N/A
Balance Plans	88.9%	84.5%	86.8%	82.5%
Active Start GenRx Plans	107.9%	103.4%	106.1%	101.1%
Vital Shield Plans	96.5%	91.0%	94.7%	87.6%
Active Start Plans	80.7%	78.0%	79.1%	77.0%
Essential Plans	91.7%	87.4%	89.7%	85.5%
PSP Plans	90.8%	87.3%	89.5%	85.3%

PPO Savings	89.4%	83.8%	85.8%	82.0%
PPO (DOI)	105.0%	98.0%	100.3%	96.1%
PPO 5000	88.8%	82.6%	84.4%	81.1%
All Plans	90.4%	85.6%	87.9%	83.5%

Impact of Length of Projection Period: As mentioned BSC used a 25 year projection period. We tested the impact of calculations using shorter projection periods of 10, 15 and 20 years. In light of the uncertain economy, the challenges faced by actuaries in setting assumptions even one or two years into the future, and the ability of carriers to adjust rates annually, we wanted to measure the impact of projection period length on the calculation of lifetime loss ratios. Table 16 presents the results.

Table 16 Impact of Alternate Projection Period on Lifetime Loss Ratios

Plan	BSC (25 yr)	10 yr	15 yr	20 yr
Active Choice	N/A	N/A	N/A	N/A
Balance Plans	88.9%	82.3%	85.2%	87.4%
Active Start GenRx Plans	107.9%	100.7%	103.9%	106.3%
Vital Shield Plans	96.5%	88.1%	91.7%	94.6%
Active Start Plans	80.7%	77.1%	78.6%	79.8%
Essential Plans	91.7%	85.4%	88.1%	90.3%
PSP Plans	90.8%	84.3%	87.3%	89.4%
PPO Savings	89.4%	82.8%	85.7%	88.0%
PPO (DOI)	105.0%	97.4%	100.4%	103.1%
PPO 5000	88.8%	82.2%	84.9%	87.2%
All Plans	90.4%	83.8%	86.7%	88.9%

None of the loss ratios for the shorter analysis periods resulted in loss ratios below 70%.

The conclusion of the sensitivity analysis is that there are two areas that are most sensitive to underlying BSC actuarial assumptions: the selection curve and the length of the projection period. If BSC underwriting process is less effective than assumed or hoped for, there may be a need to moderate future rates increases. However, in our opinion, none of these issues create any serious concerns.

Anticipated 2011 and 2012 Loss Ratios

Although the historical standard in the State of California has been the requirement that a health plan's rates meet or exceed a lifetime loss ratio requirement of 70%, the standards are changing with the passage of health care reform (i.e., PPACA). Under PPACA health plans are expected to meet an annual loss ratio test, most likely an 80% requirement for individual policies. If a health plan has annual loss ratios below the 80% minimum, some form of rebates to insureds will be required. Table 17 presents projected 2011 and 2012 loss ratio information as prepared by BSC. This information was extracted from the loss ratio projections developed by BSC and previously discussed in this letter.

Table 17 Impact of Alternate Projection Period on Lifetime Loss Ratios

Plan	BSC LLR	BSC 10% Inflation Version	2011 LR	2012 LR
Active Choice	N/A	N/A	N/A	N/A
Balance Plans	88.9%	84.5%	72.2%	83.2%
Active Start GenRx Plans	107.9%	103.4%	83.6%	96.7%
Vital Shield Plans	96.5%	91.0%	75.3%	87.3%
Active Start Plans	80.7%	78.0%	73.3%	82.2%
Essential Plans	91.7%	87.4%	75.2%	86.9%
PSP Plans	90.8%	87.3%	97.3%	95.9%
PPO Savings	89.4%	83.8%	79.5%	987.7%
PPO (DOI)	105.0%	98.0%	104.5%	117.8%
PPO 5000	88.8%	82.6%	84.9%	94.9%
All Plans	90.4%	85.6%	75.8%	86.5%

The Federal definition of what is to be included in the loss ratio calculation requires a modification to the above calculations. For example, the following adjustments need to be included:

- Exclude premium tax: BSC currently pays 2.25% premium tax and this can be excluded from the premium revenue denominator
- Include some medical management costs: the BSC information above has included more medical management costs than permitted by the Federal regulation. We estimate that the amount included should be reduced by 16.4%.
- Include HIPAA/GI policies: Experience from the HIPAA/GI policies are not included in the above products, and can be included when reporting the loss ratios. This has the impact of increasing revenue by 2.7% and increasing claims by 6.8%.

In addition, the Federal requirement is in the aggregate and not by individual plan.

The projected loss ratio for 2011 shown above increases from 75.8% to 80.2% after making the necessary adjustments. Since a good portion of the rates in effect for 2011 were from rate filings prior to January 1, 2011, and those rates were subject to the 70% lifetime loss ratio requirement, it is not unusual to see projected loss ratios prior to adjustments in 2011 that are less than 80%. However, the projected loss ratios in 2012 reflect the new requirements. The projected 2012 loss ratios for BSC are greater than 80%, prior to adjustments. With adjustments discussed above, they are well in excess of the minimum requirement.

The previous comments on projected loss ratios reflect what is anticipated in the future. Actual experience is volatile and actual loss ratios may be higher or lower than projected. Only when actual experience is known will we know whether or not the actual experience met the requirements.

Evaluation of Proposed BSC Rate Increases

There are several criteria that are being used to evaluate the proposed BSC rate increases. Some of this criteria was recently proposed as Guidance 1163:2 in draft form dated February 3, 2011. To the best of our ability we have responded to the items included in this material, although not finalized. Our comments are included by criteria for ease of reference:

- 70% lifetime loss ratio: all individual plans and plan combinations have lifetime loss ratios in excess of 70%. In sensitivity testing, the only time lifetime loss ratios were less than 70% was when the flatter selection curve was chosen and then only for the Active Start and PPO 5000 plans. BSC has chosen a very reasonable selection curve and this is not expected to be a problem.
- 80% annual loss ratio: as mentioned above, the projected 2011 loss ratios, adjusted to meet the Federal definition are expected to exceed 80%. The projected 2012 loss ratios are expected to exceed 80% prior to the required adustments. It is our opinion that the proposed rates comply with the PPACA requirement in 2011.
- Unreasonable Rate Increases: It is our opinion that the proposed rate increases are reasonable in light of:
    - Compliance with 80% PPACA requirement
    - Assumptions used by BSC are reasonable and established well within the range of reasonableness
    - Thorough documentation of rates and assumptions
    - Rates established for permissible risk categories
    - Proposed rates based upon credible experience data
- Actuarial Soundness: Actuarial soundness is defined by the California DOI Guidance document and occurs when premium rates plus investment income exceeding cost of claims, administrative expenses and the required cost of capital. As Table 8 shows, the aggregate administrative expense load is 25.4%. In light of the 80% loss ratio requirement this suggests a shortfall of 5.4% less whatever investment

income that can be earned or other expenses that may be reduced. Recent information from BSC suggests they expect pre-tax investment income levels to be at or around 2%. In addition, they have implemented some changes in commission payment levels, that when fully implemented should reduce average commission costs by 4%. Including both the investment income and change in commission payments, the overall expense load of 25.4% would be reduced by six percentage points to a projected amount of 19.4%. This is within the 20% implied by the 80% loss ratio. Although this produces a small amount of projected margin, it is not at the level necessary for long term viable operations. As a result, it appears that BSC individual rates will require a subsidy from other BSC operations in order to maintain actuarial soundness of their entire organization. Based upon recent financial results we do not believe this is an issue and BSC has shown a commitment to operate at these levels. As a result, it is our opinion that these rates are actuarially sound.

It is our opinion that the requested rates should be accepted by the department.

Summary

In summary, we find the BSC rate filing and related analysis to be quite complete and easy to follow. As stated above, we find that these rates are reasonable, are not excessive, and meet the loss ratio requirements of both the California Department of Insurance and that recently prescribed by the Federal PPACA. We appreciate the cooperation of BSC staff who responded quickly to our requests for more information. If you have any questions, please don't hesitate to call

Sincerely,

David V. Axene, FSA, CERA, FCA, MAAA
President & Consulting Actuary

cc: Jay Ripps, FSA, MAAA, DOI
John Fritz, FSA, MAAA, AHP
Josh Axene, AHP